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EXAMINER	
ROSARIO, DENNIS	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/078,299	LIU, YING	
	Examiner	Art Unit	
	Dennis Rosario	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amt. 10/05/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/05/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment was received on October 10, 2005. Claims 1-7 and 9-19 are pending. Claims 20-28 were canceled per the interview of August 26, 2005.

Drawings

2. Due to the amendment, all of the figures, 1-18, are acceptable.

Specification

3. Due to the amendment, the objection to the specification is withdrawn.

However, due to a review of the specification new objections are as follows:

Page 13, lines 5 and 11: "colour and shape" ought to be deleted since it is redundant in the respective sentences.

Page 13, fourth line from the bottom: "send" ought to be amended to "sent".

Page 15, 6th line from the bottom: "can achieve recalling" ought to be amended to "can be achieved by recalling".

Page 29, line 18: "by the two comparing images" ought to be amended to "by comparing two images".

Page 29, line 19: "0011" ought to be amended to "1100".

Page 40, line 4: "N is the" ought to be amended to "N be the".

Page 40, 9 th line from the bottom: "even values" ought to be amended to "even smaller values".

Page 42, 7th line from the bottom: "N is the" ought to be amended to "N be the".

Page 43, line 12: "even values" ought to be amended to "even smaller values".

Page 44 , last line: "use" ought to be amended to "used".

Page 46, line 5: "used classify" ought to be amended to "used to classify".

Appropriate correction is required.

Claim Objections

4. Due to the amendment, the objection to claims 3,5-7,11-19 is withdrawn.

However upon further review new objections are as follows:

Claims 1,3,9 and 12-18 are objected to because of the following informalities:

Claim 1, line 3: "or/and directory" ought to be amended to "or/and a directory".

Claim 3, line 2: "or/and directory" ought to be amended to "or/and a directory".

Claim 9, line 4 has a "." and ought to be amended to " ; and".

Claim 12, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 13, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 14, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 15, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 15, line 6: "distances define" ought to be amended to "distances that define".

Claim 16, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 17, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 18, line 1: "1 and 3" ought to be amended to "1 or 3".

Claim 18, line 2: "provide" ought to be amended to "provided".

Appropriate correction is required.

5. The following quotations of 37 CFR § 1.75(a) is the basis of objection:

> (a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

6. Claims 1,3 and 12-18 are objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Claim 1, line 3: "or/and directory and/or directories" ought to be amended to "or/and a directory and/or a plurality of directories" for clarity.

Claim 1, line 5: "specifying the directory or directories" ought to be amended to "specifying a directory or a plurality of directories" to differentiate from the claimed "directory and/or directories" of claim 1, line 3. Thus, the directories of claim 1, line 3's "or/and directory and/or directories" can clearly to be interpreted to mean the same as or different from the claimed "specifying the directory or directories" of claim 1, line 5.

Claim 3 ought to be amended similarly for the same reasons as claim 1.

Claim 12, line 2: "wherein the steps of setting parameters" has multiple antecedent basis which refers to claim 1, line 3's "specifying training parameters" and claim 1, line 5's "specifying search parameters". The phrase "wherein the steps of setting parameters" ought to be amended to "wherein the steps of specifying parameters" for clarity so that "wherein the steps of specifying parameters" clearly identifies both steps of "specifying training parameters" in claim 1, line 3 and "specifying search parameters" in claim 1, line 5.

Claims 13-18 ought to be amended similarly for the same reasons as claim 12.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility.

Claim 19 is a list of separate algorithms with an associated function. The list of algorithms does not appear to be interacting with each other. Therefore, how can one algorithm and its functions be utilized with the other algorithm and its functions? The examiner suggests amending to claim connections between the algorithms and their associated functions or results of the functions so that a single utility of the invention is clearly realized.

Claim Rejections - 35 USC § 112

9. Due to the amendment, the rejection of claims 1-19 is withdrawn.

However, upon further review of the amendment, new 112 rejections for claims 2,3,4,10,11 and 19 are presented:

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 2-4 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 4 has the phrase "wherein the order of the steps" has no antecedent basis in the respective independent claims, 1 and 3. Thus, there is no order mentioned in claims 1 and 3. Even though claims 1 and 3 mention steps, claims 2 and 4 are claiming an order of the steps which has two interpretations:

1) The order of the steps of claims 1 and 3 are altered so that the step of "specifying training parameters" is done first.

2) The step of "specifying sample images or/and segments..." can be changed to specifying segments first or/and sample images second.

Please show support in the specification via page and line number showing support for the order of the steps so that one interpretation is clearly evident.

Regarding claim 3, the origin or the number of classes of the claimed "each class" in lines 3,4 is not clear; thus, claim 3 appears to be missing and ought to include an additional step of "specifying a plurality of classes".

Regarding claim 3, line 6 "each class" has no antecedent basis and ought to be amended to "said each class" to correspond to claim 3, lines 2 and 3's "each class".

Regarding claim 10, line 3: "the search directory" ought to be amended to "said search directory or directories" for clarity and to correspond to claim 3, line 4's "directory or directories".

Regarding claim 10, line 4: "of this image in each class" has no antecedent basis ought to be amended to "of at least one of said each image in said each class" to correspond to claim 10, line 3's "each image" and claim 3, lines 2 and 3's "each class".

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-7 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Liddy et al. (US Patent 6,304,864 B1).

Regarding claim 1, Liddy et al. discloses a computer implemented process for content-based images search or retrieval with these steps:

a) specifying sample images (Fig. 3A, num. 65 specifies images or graphics via fig.3A, num. 66.) or/and directory (Fig. 3A,num. 68);

b) specifying training parameters (Fig. 2A, num. 32 is used by the processes of fig. 2A, numerals 36 and 38 to create a trained network.);

c) training by clicking a button (fig. 3A,num. 77) in the GUI (As shown in fig. 3A) of the software implementation;

d) specifying the directory (Fig. 3A,num. 68) to be searched (via fig. 3A, num. 66 is a search type that is applied in fig. 3A,num. 72.);

e) specifying search parameters (fig. 3A, num. 66);

f) searching by clicking a button (Fig. 3A,num. 72) in the GUI of the software implementation.

Regarding claim 2, Liddy et al. discloses a computer implemented process of claim 1, wherein the order of steps is altered (See col. 9, lines 44,45 that describes training may be done before a search.) to cover all possible combinations.

Regarding claim 3, Liddy et al. discloses a computer implemented process for image classification with these steps:

a) specifying sample images (via fig. 3A,numerals 65 and 66.) or/and directory (fig. 3A, num. 68) for each class (or "relevant and non-relevant" in col. 14, line 9 class.);

b) specifying training parameters (Fig. 3A, num. 66);

c) training by clicking a button (Fig. 3A, num. 77) in the GUI of the software implementation;

d) specifying the directory (Fig. 3A, num. 68) or directories to be searched;

e) specifying search parameters (Fig. 3A,num. 66);

f) searching by clicking a button (Fig. 3A, num. 72) in the GUI of the software implementation for each class, and

g) classifying the images by clicking a button (Fig. 3A,num. 77 is a button for a neural network that inherently classifies.) in the GUI of the software implementation.

Regarding claim 5, Liddy et al. discloses a computer implemented process of claim 1, search process, wherein the steps are:

a) saved in the batch code ("batch file" in col. 8, line 10) by clicking a save button,

b) recalled by clicking a file button, and

c) executed by clicking a batch command button in the GUI of the software implementation (The remaining limitations are inherent for a batch code or file.).

Claims 4 and 6 are rejected the same as claims 2 and 5, respectively. Thus, argument similar to that presented above for claims 2 and 5 is equally applicable to claims 4 and 6, respectively.

Regarding claim 7, Liddy et al. discloses a computer implemented process of claims 1 or 3, further comprising:

a) the step of retraining (fig. 3A,num. 62b has an associated retrain function.), which allows the system to be trained by more than one image, or directory that contains images.

Regarding claim 9, Liddy et al. discloses a computer implemented process of claim 1, further comprising:

a) output results being listed in a result file, which has a list of names ("address" in col. 11, line 34) and weights ("retrieval values" in col. 11, line 36):

a1) wherein the weights of an image are related to the characteristics (Fig. 3A, num. 65), which users are looking for.

Regarding claim 10, Liddy et al. discloses a computer implemented process of claim 3 further comprising:

a) output results (Fig. 3B, num. 79) being listed in a result file, which has a list of names ("address" in col. 11, line 34) and weights ("retrieval values" in col. 11, line 36):

a1) an image link ("address" in col. 11, line 34) for each image (or "graphics" in col. 5, line 38) in the search directory;

a2) the classification weights of this image ("retrieval values" in col. 11, line 36) in each class (The list of names or addresses as shown in fig. 3B,num. 79 has an associated retrieval value for the relevant class and not the non-relevant class.); and

a3) the classification result of this image as a link (As shown in fig. 3B,num. 79).

Regarding claim 11, Liddy et al. discloses a computer implemented process (Fig. 1,num. 8) for content-based images verification, identification, retrieval, and classification with software components, which use IVI-API as an application-programming interface (Fig. 1,numerals 12,14 and 21).

14. Claims 1 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Lipson et al. (US Patent 6,463,426 B1).

Regarding claim 1, Lipson et al. teaches a computer implemented process for content-based images search or retrieval with these steps:

a) specifying sample images (Fig. 7, numerals 134a-134c);

b) specifying training parameters ("internal parameters" in col. 9, line 27 for "learning" in col. 9, line 26);

c) training ("learning" in col. 2, line 27 or "learning or refining" in col. 9, line 28) by clicking a button (Fig. 7 shows a "Query" button that initiates a comparison of "two...images of unknown content" in col. 9, lines 18,19 to "generate...important image attributes" in col. 9, lines 23,24. Thus, the important attributes of two images are known via the learning or refining initiated by clicking the query button.) in the GUI of the software implementation;

d) specifying the directories ("databases" in col. 7, line 14) to be searched;

e) specifying search parameters (Fig. 7, numerals 134a-134c);

f) searching by clicking a button (Fig. 7 shows a "Query" button.) in the GUI of the software implementation.

Regarding claim 17, Lipson et al. discloses a computer implemented process of claim 1 and 3, wherein the steps of setting parameters comprise:

a) the Image Type (Fig. 2, numerals 30a-30k), which specifies ABM or APN algorithm (or modules shown in fig. 2, numerals 30a-30k).

15. Claims 1,12 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Laaksonen et al. (cited IEEE article.).

Regarding claim 1, Laaksonen et al. teaches a computer implemented process for content-based images search or retrieval with these steps:

a) specifying sample images ("subset of images" in page 175, left column, line 23.);

b) specifying training parameters ("user's responses...[are used]...to learn" in page 176, right column, section 2.3, lines 14,15.);

c) training by clicking a button (" 'Con-tinue Query' button" on page 175, left column, lines 25,26 corresponds to the above mentioned "user's responses...[that are used]...to learn" in page 176, right column, section 2.3, lines 14,15 once the user clicks the continue query button.) in the GUI of the software implementation;

d) specifying the directories ("list of databases" in page 175, left column, line 14) to be searched;

e) specifying search parameters ("keyword" on page 175, left column, line 8 are inherently used for searching in the field of Laaksonen et al.);

f) searching by clicking a button (" 'Con-tinue Query' button" on page 175, left column, lines 25,26 initiates a search.) in the GUI of the software implementation.

Regarding claim 12, Laaksonen et al. discloses a computer implemented process of claim 1 and 3, wherein the steps of setting parameters comprises the Internal Representation (or "thumbnail" in page 174, left column, line 22.), which specifies the dimensions of a pixel array used for computation, which may or may not be the actual image pixel array.

Regarding claim 18, Laaksonen et al. discloses a computer implemented process of claim 1 and 3, wherein the parameter is provide in a file (or "script" on page 177, right column, line 22.), which specify more complicated setting than the graphical user interface.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laaksonen et al. (cited IEEE article) in view of Wang et al. (US Patent 5,802,361 A).

Regarding claim 13, Laaksonen et al. does not teach the remaining limitations of claim 13, but teaches "add[ing] better feature representations...[such as]...shape features (page 179, left col., section 5, lines 15-19)." Thus, Laaksonen et al. suggests that in order to find the similarity between objects one of ordinary skill will have to compare shapes of objects

Wang et al. teaches similarity with respect to images (see abstract) and shapes as shown in figure 5f and claim 13 of:

a computer implemented process, wherein the steps of setting parameters comprises:

a) the Symmetry, which represents similarity under certain types of changes, such as Translation symmetry (or "translations" in col. 24, line 53), Scaling (or "scaling" in col. 24, line 52), Rotation (or "rotations" in col. 24, line 53) and which is implemented by physically applying a sample image (or "object image" in col. 23, line 61) to all possible positions (A "fixed" in col. 23, line 56 scale or translation or rotation is one possible position of all possible positions.) and train (or "training" in col. 23, line 59) a software ("high level analyzer" in col. 23, line 60) with all of these transformed images (or "set of...images" in col. 23, line 56).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Laaksonen et al.'s teaching of shapes with Wang et al.'s teaching of shapes since Wang et al.'s shapes "is desirable to...allow[ ] a user to specify...shapes...and a method of searching that...attribute [or shape] in an image...(Wang et al., col. 4, lines 19-23)."

18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drossu et al. (cited IEEE article) and Savakis et al. (US Patent 6,847,733 B2).

Regarding claim 3, Drossue et al. discloses a computer implemented process for image classification with these steps:

a) specifying training (Fig. 1, label: "Training") parameters;

b) training by clicking a button in the GUI of the software implementation (This limitation is inherent in the environment of fig. 1);

c) specifying parameters (Fig. 1, label: "Parameters"); and

d) classifying the images by clicking a button in the GUI of the software implementation (Fig. 1, label: "Constructive HDE" is a button that corresponds to a classification program as shown in fig. 6, label: "Classification Improvement Threshold.").).

Drossue et al. does not teach the remaining limitations of

a) specifying sample images for each class;

b) specifying the directory or directories to be searched;

c) specifying search parameters;

d) searching by clicking a button in the GUI of the software implementation for each class.

However, Drossue et al. does teach that a plurality of "classification problems...to classify...patterns" that can be used with the invention in page 367, left column, section I, lines 10,11. Thus, Drossue et al. suggests that a certain method should be used to solve the problems; however, Drossue et al. does not teach the method of solving the problems and cites a reference as an "example" in page 367, left column, section I, line 12 instead. Thus, Drossue et al. suggests to one of ordinary skill in the art to find a reference that teach classification of patterns to be used with Drossue et al.'s invention. Thus, the limitations that Drossue et al. does not teach for classification may be taught in another reference and teaches the GUI of Drossue et al. can embed other neural networks (see title.) in order to classify patterns.

Savakis et al. teaches classification of patterns in col. 14, lines 32,33 using "neural networks" in col. 14, line 37 and a method of classification in col. 12, line 20 to col. 14, line 42 as taught and suggested, respectively by Drossue et al. and the remaining limitations of claim 3:

a) specifying sample images (Fig. 1, label: "IMAGE I") for each class (Fig. 1, numerals 20 and 22);

b) specifying the directory (Fig. 13, num. 1200) to be searched;

c) specifying search parameters (Fig. 13, num. 1220);

d) searching by clicking a button in the GUI (Fig. 11, num. 120 corresponds to the claimed GUI that inherently includes the claimed button that performs searching.) of the software implementation for each class.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Drossue et al.'s teaching of classification, because Savakis et al. provides a detailed method of classification that can be used in a plurality of "neural nets" in col. 14, line 37. Thus, Savakis et al.'s classification of patterns can be used with Drossue et al.'s neural net so that Drossue et al.'s invention can include one more classification problem to be solved by the invention of Drossue et al.

19. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Drossu et al. (cited IEEE article) and Savakis et al. (US Patent 6,847,733 B2) as applied to claim 3 above, and further in view of Tsai (US Patent 6,697,504 B2).

Regarding claim 14, Drossu et al. of the combination does not teach the limitation of claim 14 ,but does teach that more than one neural net can be used and that a plurality of neural nets can interact with each other on page 371, left column, section III, lines 2-6 and other neural nets can be embedded (see title). Thus, Drossu et al. suggests that a plurality of neural nets can be embedded to interact with each other.

Tsai teaches a plurality of neural nets as shown in fig. 8, label "SOM" that are interacting with each other at the output of each SOM that is capable of being embedded in the invention of Drossu et al. and teaches the remaining limitation of claim 14:

A computer implemented process, wherein the steps of setting parameters comprises:

a) the Sensitivity (Fig. 8, label: "FIRST LEVEL DECISION"), or whatever the terminology used, which defines a distance (or "distances" in col. 2, line 1) between two neural ABM nets (or "units" in col. 2, line 1) generated by two images (or "each...image" in col. 2; line 2 for each respective unit.) in a connection space (Fig. 7 shows a CONNECTION LAYER which is interpreted as a space since a space would include a layer.) such that the distance can be used to eliminate unmatched images (for image recognition purposes (see title).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Drossu et al.'s pattern classification because, Tsai et al.'s classification improves upon pattern classification (Tsai, col. 1, lines 23-37).

Claim 16 is rejected the same as claim 14. Thus, argument similar to that presented above for claim 14 is equally applicable to claim 16.

20. Claims 1 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (US Patent 6,459,809 B1) in view of Liddy et al. (US Patent 6,304,864 B1) further in view of Rajagopal et al. (US Patent 6,665,335 B1).

Regarding claim 1, Jensen et al. teaches a computer implemented process for content-based images search or retrieval with these steps:

a) specifying sample images (Fig. 5, num. 500);

b) specifying training parameters ("transformations and images...could be used to train..." in col. 8, lines 58,59);

c) specifying the directory (or "archetype" in col. 12, line 61) to be searched (via a "searching system" in col. 12, line 56);

d) specifying search parameters ("semantic values may be used to...search" in col. 9, lines 56-59.);

Jensen et al. does not teach the limitation of:

a) training by clicking a button in the GUI of the software implementation; and

b) searching by clicking a button in the GUI of the software implementation.

However, Jensen et al. does teach the invention can be used with a neural network for training in col. 8, lines 57-59.

Liddy et al. teaches a neural network as shown in fig. 3A,num. 77 that can be trained by the system of Jensen et al. and teaches the remaining limitations of:

a) training by clicking a button (Fig. 3A,num. 77) in the GUI of the software implementation; and

b) searching by clicking a button (Fig. 3A,num. 76) in the GUI of the software implementation.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Jensen et al.'s teaching of training with Liddy et al.'s GUI, because Liddy et al.'s GUI allows a user to select via the GUI documents that are "relevant" in col. 11, line 63.

Regarding claim 15, Jensen et al. of the combination teaches a computer implemented process of claim 1 and 3, wherein the steps of setting parameters comprises the Blurring ("neighborhood" in col. 7, line 36), or whatever the terminology used, which measures ("measure" in col. 5, line 38) due to (scale while rotation is invariant or vice versa.) and which is implemented by enlarging a single image (Fig. 2) to a set of images (Fig. 3, numerals 300-304) by using the Hausdorff distance (col. 5, line 47) define the radius (col. 7, line 41) of the set. Thus, Jensen teaches that a distance of a neighborhood can be used to measure based on scale while rotation is invariant or rotation while scale is invariant or both scale and rotation is invariant.

However, Jensen et al. does not teach measuring distortion due to rotation or scale, but does teach that a distance can "be implemented in various ways" in col. 5, lines 40-42 and provides several examples in col. 5, lines 42-48 which are used in a "metric space" in col. 5, line 25 which "is well understood in the art" in col. 5, line 25. Thus, Jensen et al. suggests finding a teaching that uses any one the distances that were used as examples and using the distance in a metric space.

In addition, Jensen teaches that a "content stream is a communication line sporadically...transmitting content from one location to another" in col. 4, lines 28-30. Thus, Jensen et al. suggests a method of recreating a content stream after the content stream has been separated due to a sporadic transmission.

Rajagopal et al. teaches a metric space as shown in figures 11,12 and 20 and a distance as shown by the arrow of fig. 20 and teaches a method of recreating a signal that has an associated "shift (e.g. time delay)" in col.1, line 34 that corresponds to Jensen et al.s' sporadic transmission and teaches the remaining limitation of measuring distortion or ("shift" in col. 3, line 57 or "displacement" in col. 18, line 65) due to translation and rotation ("spatial shift [and] rotation angle" in col. 3, line 59 or "orientation" in col. 18, line 65, respectively.).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Jensen et al.'s metric space with Rajagopal et al.'s teaching of shift, because Rajagopal et al.'s teaching of shift is able to recreate the content stream of Jensen et al.'s sporadic transmission.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 6-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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